

# SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: SABINA GAZI Examiner #: 74141 Date: 4/10/08  
 Art Unit: 1616 Phone Number: 20622 Serial Number: 10/816,611  
 Mail Box and Bldg/Room Location: 4A.45 Results Format Preferred (circle) PAPER DISK E-MAIL

4c7p Rem.  
 If more than one search is submitted, please prioritize searches in order of need.

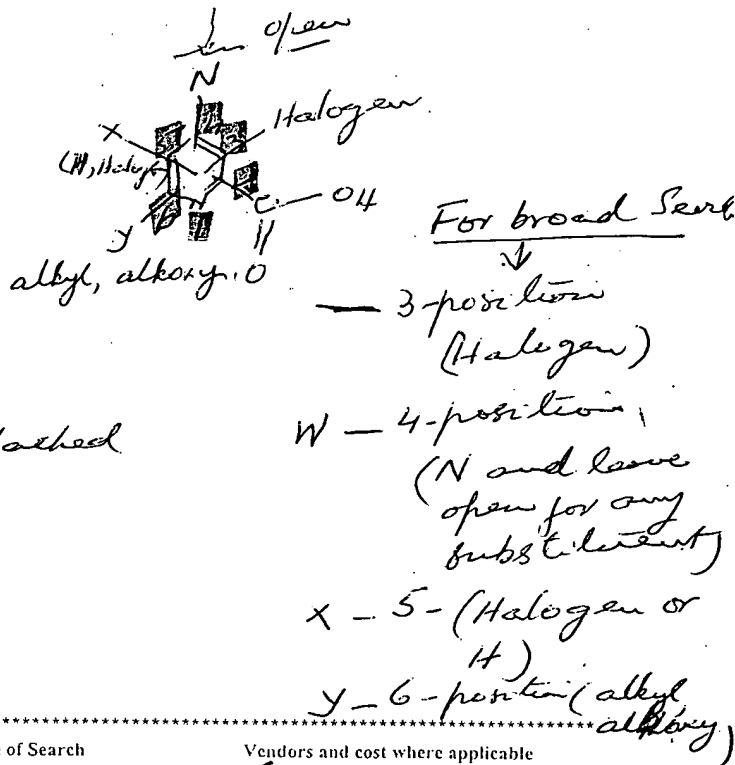
\*\*\*\*\*  
 Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of invention: 6- alkyl or alkaryl 4-amino-picolinates

Inventors (please provide full names): Terry Williams Balko et al  
DOW AGROSCIENCES

Earliest Priority Filing Date: 4/2/2003 (66/459,892)

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.



Please see attached sheets

Thank you

## STAFF USE ONLY

Searcher: <u>Sahar</u>	Type of Search	Vendors and cost where applicable
Searcher Phone #: _____	NA Sequence (#) _____	STN <input checked="" type="checkbox"/>
Searcher Location: _____	AA Sequence (#) _____	Dialog _____
Date Searcher Picked Up: <u>5/5/06</u>	Structure (#) _____	Questel/Orbit _____
Date Completed: <u>5/8/06</u>	Bibliographic _____	Dr. Link _____
Searcher Prep. Review Time: <u>30</u>	Litigation _____	Lexis/Nexis _____
Clerical Prep. Time: _____	Fulltext _____	Sequence Systems _____
Online Time: <u>85</u>	Patent Family _____	WWW/Internet _____
	Other _____	Other (specify) _____

2

=> d his nofile

(FILE 'HOME' ENTERED AT 09:18:11 ON 08 MAY 2006)

FILE 'REGISTRY' ENTERED AT 09:18:15 ON 08 MAY 2006

L1 SCREEN 2076  
L2 STRUCTURE UPLOADED  
L3 QUE ABB=ON PLU=ON L2 AND L1  
D L2  
L4 0 SEA SSS SAM L2  
L5 15 SEA SSS FUL L2  
D SCAN

FILE 'CAPLUS' ENTERED AT 09:21:13 ON 08 MAY 2006

L6 7 SEA ABB=ON PLU=ON L5  
S L2

FILE 'REGISTRY' ENTERED AT 09:21:55 ON 08 MAY 2006

L\*\*\* DEL 0 S L2

FILE 'CAPLUS' ENTERED AT 09:21:55 ON 08 MAY 2006

L\*\*\* DEL 0 S L7  
D COST

FILE 'STNGUIDE' ENTERED AT 09:22:26 ON 08 MAY 2006

FILE 'CAPLUS' ENTERED AT 09:23:45 ON 08 MAY 2006

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L7 21 SEA ABB=ON PLU=ON ("BALKO T"/AU OR "BALKO T W"/AU OR "BALKO  
TERRY W"/AU OR "BALKO TERRY WILLIAM"/AU)  
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L8 8 SEA ABB=ON PLU=ON (BUYSSE/AU OR "BUYSSE A M"/AU OR "BUYSSE A  
M M"/AU OR "BUYSSE ANN M"/AU OR "BUYSSE ANN MARIE"/AU OR  
"BUYSSE ANNE MARIE"/AU)  
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L9 27 SEA ABB=ON PLU=ON ("FIELDS S"/AU OR "FIELDS S C"/AU OR  
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STEVEN"/AU OR "FIELDS STEVEN C"/AU)  
E IRVINE N/AU  
L10 19 SEA ABB=ON PLU=ON ("IRVINE N"/AU OR "IRVINE N M"/AU OR  
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E LO /AU  
E LO W/AU  
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L14 12 SEA ABB=ON PLU=ON ("SCHMITZER P"/AU OR "SCHMITZER P R"/AU OR  
"SCHMITZER PAUL R"/AU OR "SCHMITZER PAUL RICHARD"/AU)  
L15 4 SEA ABB=ON PLU=ON L6 AND (L7 OR L8 OR L9 OR L10 OR L11 OR  
L12 OR L13 OR L14)

FILE 'STNGUIDE' ENTERED AT 09:32:36 ON 08 MAY 2006

FILE 'CAPLUS' ENTERED AT 09:35:27 ON 08 MAY 2006

E AMINOPICOLINATE/CT

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D TI 1-8  
L17 30 SEA ABB=ON PLU=ON AMINOPICOLINATE?/OBI  
L18 72786 SEA ABB=ON PLU=ON HERBICID?/OBI  
L19 3 SEA ABB=ON PLU=ON L17 AND (L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14)  
L20 36 SEA ABB=ON PLU=ON L18 AND (L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14)  
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L22 0 SEA ABB=ON PLU=ON L21 AND L17  
D BIB L21 1  
L23 6 SEA ABB=ON PLU=ON L17 AND L18  
L24 8 SEA ABB=ON PLU=ON (L15 OR L16 OR L19)  
L25 10 SEA ABB=ON PLU=ON (L6 OR L23)  
L26 6 SEA ABB=ON PLU=ON L25 NOT L24

FILE 'STNGUIDE' ENTERED AT 09:46:35 ON 08 MAY 2006

FILE 'REGISTRY' ENTERED AT 10:08:55 ON 08 MAY 2006

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L28 STRUCTURE UPLOADED  
L29 QUE ABB=ON PLU=ON L28 AND L27  
L30 0 SEA SSS SAM L28 AND L27  
D QUE  
L31 0 SEA SSS SAM L28  
L32 16 SEA SSS FUL L28  
L33 1 SEA ABB=ON PLU=ON L32 NOT L5  
D SCAN

FILE 'CAPLUS' ENTERED AT 10:15:09 ON 08 MAY 2006

L34 7 SEA ABB=ON PLU=ON L32  
L35 0 SEA ABB=ON PLU=ON L34 NOT (L24 OR L26)  
L36 3 SEA ABB=ON PLU=ON L34 NOT L24  
D SCAN

FILE 'BEILSTEIN' ENTERED AT 10:21:03 ON 08 MAY 2006

L37 0 SEA SSS SAM L28  
L38 1 SEA SSS FUL L28  
L39 1 SEA ABB=ON PLU=ON L38/COM  
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L42 36 SEA ABB=ON PLU=ON L41 NOT (PY>2003 OR AY>2003 OR PRY>2003)  
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FILE 'MARPAT' ENTERED AT 10:28:07 ON 08 MAY 2006

FILE 'REGISTRY' ENTERED AT 10:29:33 ON 08 MAY 2006

FILE 'CAPLUS' ENTERED AT 10:29:35 ON 08 MAY 2006

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              D HITSTR  
L47           3 SEA ABB=ON   PLU=ON   L34 NOT (L7 OR L8 OR L9 OR L10 OR L11 OR  
              L12 OR L13 OR L14)  
L48           3 SEA ABB=ON   PLU=ON   L34 NOT L24  
L49           0 SEA ABB=ON   PLU=ON   L48 NOT L47  
L50           11 SEA ABB=ON   PLU=ON   (L24 OR L47 OR L48)  
L51           3 SEA ABB=ON   PLU=ON   L34 NOT (PY>2003 OR AY>2003 OR PRY>2003)

=> file caplus

FILE 'CAPLUS' ENTERED AT 10:38:03 ON 08 MAY 2006

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FILE COVERS 1907 - 8 May 2006   VOL 144 ISS 20

FILE LAST UPDATED: 7 May 2006   (20060507/ED)

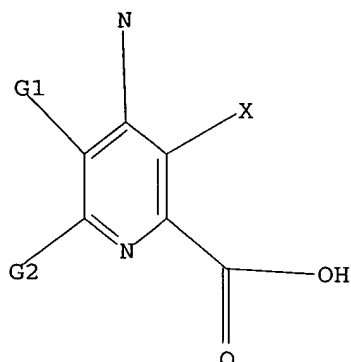
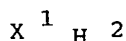
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<http://www.cas.org/infopolicy.html>

'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

=> d que 124

L2           STR

Ak<sup>3</sup>Ak<sup>4</sup>-O

G1 [@1], [@2]

G2 [@3], [@4]

Structure attributes must be viewed using STN Express query preparation.

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OR "RICHBURG JOHN SANDERS"/AU OR "RICHBURG JOHN SANDERS
III"/AU)
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OR L11 OR L12 OR L13 OR L14)
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OR (L10 AND (L11 OR L12 OR L13 OR L14)) OR (L11 AND (L12 OR

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 L19 3 SEA FILE=CAPLUS ABB=ON PLU=ON L17 AND (L7 OR L8 OR L9 OR L10  
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=> d ibib abs hitstr l24 1-8

L24 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2006:388594 CAPLUS  
 TITLE: Thieno-pyrimidine compounds having fungicidal activity  
 INVENTOR(S): Brewster, William Kirkland; Klittich, Carla Jean  
 Rasmussen; **Balko, Terry William**; Breaux,  
 Nneka Tuere; Erickson, William Randal; Hunter, James  
 Edward; **Lowe, Christian Thomas**; Ricks,  
 Michael John; Siddall, Thomas Lyman; Yerkes, Carla  
 Nanette; Zhu, Yuanming  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 43 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

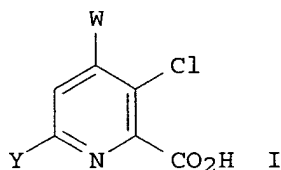
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006089370	A1	20060427	US 2005-256117	20051021
WO 2006047397	A1	20060504	WO 2005-US38145	20051021
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRIORITY APPLN. INFO.: US 2004-621577P P 20041021  
 AB The present invention relates to thieno[2,3-d]-pyrimidine compds. having  
 fungicidal activity.

L24 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2005:122777 CAPLUS  
 DOCUMENT NUMBER: 142:192757  
 TITLE: Preparation of 6-(1,1-difluoroalkyl)-4-  
**aminopicolinate** derivative herbicides  
 INVENTOR(S): **Balko, Terry William**; **Fields, Stephen**  
**Craig**; **Irvine, Nicholas Martin**;  
**Lowe, Christian Thomas**; **Schmitzer, Paul**  
**Richard**  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 10 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent

LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005032651	A1	20050210	US 2004-911683	20040804
AU 2004265309	A1	20050224	AU 2004-265309	20040804
CA 2532100	AA	20050224	CA 2004-2532100	20040804
WO 2005016887	A1	20050224	WO 2004-US25116	20040804
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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EP 1651607	A1	20060503	EP 2004-780023	20040804
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PRIORITY APPLN. INFO.:			US 2003-493555P	P 20030804
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OTHER SOURCE(S):		CASREACT 142:192757; MARPAT 142:192757		
GI				



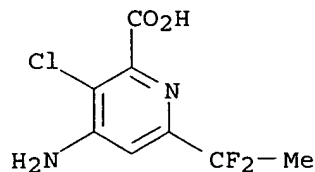
AB 6-(1,1-Difluoroalkyl)-4-aminopicolinate derivs. I (Y = 1,1-difluoroalkyl; W = NO<sub>2</sub>, N<sub>3</sub>, N:CR<sub>1</sub>R<sub>2</sub> or NHN:CR<sub>3</sub>R<sub>4</sub>; R<sub>1</sub>, R<sub>2</sub> = H, alkyl, alkenyl, alkynyl, aryl, heteroaryl, alkoxy, amino, acyl, etc.; R<sub>3</sub>, R<sub>4</sub> = H, alkyl, alkenyl, alkynyl, aryl or heteroaryl; :CR<sub>3</sub>R<sub>4</sub> = 5- or 6-membered saturated ring) are prepared as broad-spectrum herbicides.

IT 837367-59-6P

RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation as herbicide)

RN 837367-59-6 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-(1,1-difluoroethyl)- (9CI)  
 (CA INDEX NAME)



L24 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:825101 CAPLUS

DOCUMENT NUMBER: 141:308993

TITLE: 6-Alkyl or alkenyl-4-aminopicolinates and their use as herbicides

INVENTOR(S): Balko, Terry William; Buysse, Ann Marie; Fields, Stephen Craig; Irvine, Nicholas Martin; Lo, William Chi-Leung; Lowe, Christian Thomas; Richburg, John Sanders; Schmitzer, Paul Richard

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 12 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

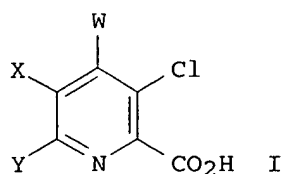
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004198608	A1	20041007	US 2004-816611	20040402
AU 2004228666	A1	20041021	AU 2004-228666	20040402
CA 2517486	AA	20041021	CA 2004-2517486	20040402
WO 2004089906	A2	20041021	WO 2004-US10358	20040402
WO 2004089906	A3	20041202		
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EP 1608624	A2	20051228	EP 2004-749733	20040402
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BR 2004008935	A	20060404	BR 2004-8935	20040402
CN 1764646	A	20060426	CN 2004-80007800	20040402
NO 2005004378	A	20051018	NO 2005-4378	20050921
PRIORITY APPLN. INFO.:			US 2003-459892P	P 20030402
			WO 2004-US10358	A 20040402

OTHER SOURCE(S): MARPAT 141:308993

GI





AB 4-Aminopyridines with alkyl or alkenyl substituents in the 6-position (I, wherein X = H, F; Y = C1-4 alkyl, C1-4-alkoxy- or thioalkoxy-substituted alkyl, or C2-3 alkenyl; and W represents NO<sub>2</sub>, N<sub>3</sub>, NR<sub>1</sub>R<sub>2</sub>, etc.; R<sub>1</sub> and R<sub>2</sub> independently = H, C1-6 alkyl, etc.) and their amine and acid derivs. are potent herbicides demonstrating a broad spectrum of weed control. Thus, Me 4-amino-3-chloro-6-ethylpyridine-2-carboxylate (II) at 250 ppm controlled cocklebur (*Xanthium strumarium*), lamb's-quarters (*Chenopodium album*), and pigweed (*Amaranthus retroflexus*) by 95, 100, and 98%, resp. (postemergent control), with no injury to corn (*Zea mays*). Preemergent control of lamb's-quarters by II at 280 ppm was 98%.

IT 767334-35-0 767334-36-1 767334-37-2

767334-38-3 767334-39-4 767334-40-7

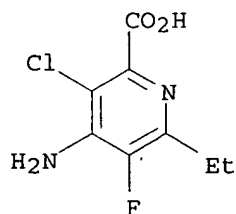
767334-41-8

RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)

(as herbicide with broad spectrum of weed control)

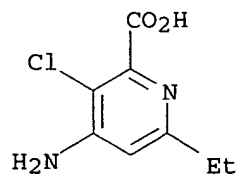
RN 767334-35-0 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-ethyl-5-fluoro- (9CI) (CA INDEX NAME)



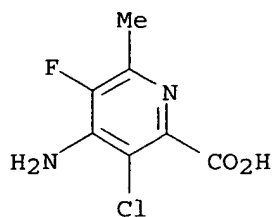
RN 767334-36-1 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-ethyl- (9CI) (CA INDEX NAME)



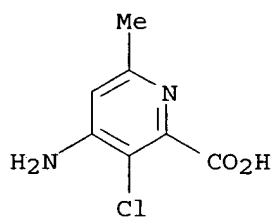
RN 767334-37-2 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-5-fluoro-6-methyl- (9CI) (CA INDEX NAME)



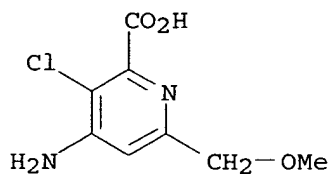
RN 767334-38-3 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-methyl- (9CI) (CA INDEX NAME)



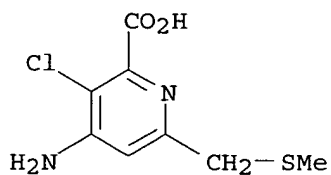
RN 767334-39-4 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-(methoxymethyl)- (9CI) (CA INDEX NAME)



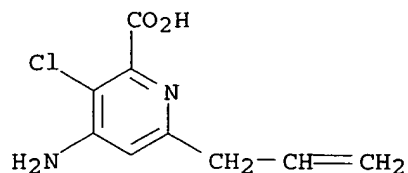
RN 767334-40-7 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-[(methylthio)methyl]- (9CI) (CA INDEX NAME)



RN 767334-41-8 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-(2-propenyl)- (9CI) (CA INDEX NAME)



L24 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:117817 CAPLUS

DOCUMENT NUMBER: 138:153444

TITLE: Preparation of 6-aryl-4-aminopicolinic acids as herbicides with excellent crop selectivity

INVENTOR(S): **Balko, Terry William; Buysse, Ann Marie; Epp, Jeffrey Brian; Fields, Stephen Craig; Lowe, Christian Thomas; Keese, Renee Joan; Richburg, John Sanders, III; Ruiz, James Melvin; Weimer, Monte Ray; Green, Renard Antonio; Gast, Roger Eugene; Bryan, Kristy; Irvine, Nicholas Martin; Lo, William Chi-Leung; Brewster, William Kirkland; Webster, Jeffrey Dale**

PATENT ASSIGNEE(S): Dow AgroSciences, LLC, USA

SOURCE: PCT Int. Appl., 84 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

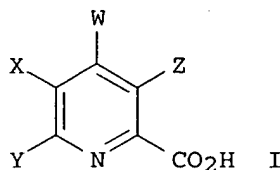
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

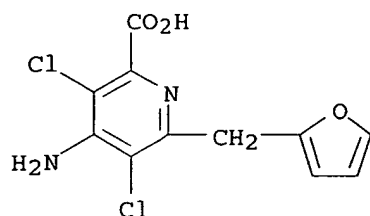
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003011853	A1	20030213	WO 2002-US24120	20020730
WO 2003011853	C1	20040715		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2453623	AA	20030213	CA 2002-2453623	20020730
US 2003114311	A1	20030619	US 2002-209448	20020730
US 6784137	B2	20040831		
EP 1414814	A1	20040506	EP 2002-756794	20020730
EP 1414814	B1	20050202		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002011532	A	20040914	BR 2002-11532	20020730
CN 1551876	A	20041201	CN 2002-814816	20020730
JP 2005505523	T2	20050224	JP 2003-517045	20020730
PRIORITY APPLN. INFO.:			US 2001-308617P	P 20010730
			WO 2002-US24120	W 20020730

OTHER SOURCE(S): MARPAT 138:153444

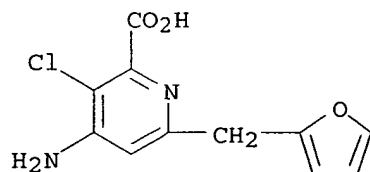
GI



- AB 6-Aryl-4-aminopicolinic acids (shown as I; variables defined below; e.g. 4-amino-3-chloro-6-(4-methylphenyl)pyridine-2-carboxylic acid) and agriculturally acceptable derivs. of the carboxylic acid group are potent herbicides demonstrating a broad spectrum of weed control. Twelve herbicidal compns. are tabulated. Although the methods of preparation are not claimed, 47 example preps. are included and >200 specific I are mentioned along with phys. and/or herbicidal properties. Post-emergent herbicidal activities are included for some I against cocklebur (*Xanthium strumarium*), lambsquarter (*Chenopodium album*), barnyard grass (*Echinochloa crus-galli*) and yellow nutsedge (*Cyperus esculentus*); selectivity to wheat and corn is also shown. Pre-emergent herbicidal activities are included for some I against lambsquarter (*Chenopodium album*), pigweed (redroot) (*Amaranthus retroflexus*), crabgrass (large) (*Digitaria sanguinalis*), and giant foxtail (*Setaria faberii*). For I: X = H, halogen, C1-C6 alkyl, C1-C6 alkoxy, C1-C6 alkylthio, aryloxy, nitro, C1-C6 haloalkyl, C1-C6 haloalkoxy, thiocyanate, or cyano; Y = aryl, Ph, indanyl or naphthyl or heteroaryl (5- or 6-membered heteroarom. rings containing  $\geq 1$  heteroatoms which may be fused to other aromatic systems; aryl or heteroaryl group being unsubstituted or substituted with  $\geq 1$  substituents = halogen, hydroxy, nitro, cyano, aryloxy, formyl, C1-C6 alkyl, C2-C6 alkenyl, C2-C6 alkynyl, C1-C6 alkoxy, halogenated C1-C6 alkyl, halogenated C1-C6 alkoxy, C1-C6 acyl, C1-C6 alkylthio, C1-C6 alkylsulfinyl, C1-C6 alkylsulfonyl, aryl, C1-C6 OC(O)alkyl, C1-C6 NHC(O)alkyl, C(O)OH, C1-C6 C(O)Oalkyl, C(O)NH<sub>2</sub>, C1-C6 C(O)NHalkyl, C1-C6 C(O)N(alkyl)<sub>2</sub>, -OCH<sub>2</sub>CH<sub>2</sub>-, -OCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -OCH<sub>2</sub>O- or -OCH<sub>2</sub>CH<sub>2</sub>O-). Z = halogen, C1-C6 alkyl, C1-C6 alkoxy, C1-C6 alkylthio, aryloxy, nitro, C1-C6 haloalkyl, C1-C6 haloalkoxy, thiocyanate, or cyano; and W = -NO<sub>2</sub>, -N<sub>3</sub>, -NR<sub>1</sub>R<sub>2</sub>, -N:CR<sub>3</sub>R<sub>4</sub> or -NHN:CR<sub>3</sub>R<sub>4</sub> (R<sub>1</sub> and R<sub>2</sub> = H, C1-C6 alkyl, C3-C6 alkenyl, C3-C6 alkynyl, aryl, heteroaryl, hydroxy, C1-C6 alkoxy, amino, C1-C6 acyl, C1-C6 carboalkoxy, C1-C6 alkylcarbonyl, C1-C6 alkylsulfonyl, C1-C6 trialkylsilyl or C1-C6 dialkyl phosphonyl or R<sub>1</sub> and R<sub>2</sub> taken together with N = 5- or 6-membered (un)saturated ring which may contain addnl. O, S or N heteroatoms; and R<sub>3</sub> and R<sub>4</sub> = H, C1-C6 alkyl, C3-C6 alkenyl, C3-C6 alkynyl, aryl or heteroaryl or R<sub>3</sub> and R<sub>4</sub> taken together with :C = a 5- or 6-membered saturated ring).
- IT **496852-28-9P**, 4-Amino-3,5-dichloro-6-(2-furfuryl)pyridine-2-carboxylic acid **496852-30-3P**, 4-Amino-3-chloro-6-(2-furfuryl)pyridine-2-carboxylic acid  
 RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of 6-aryl-4-aminopicolinic acids as herbicides with excellent crop selectivity)
- RN 496852-28-9 CAPLUS
- CN 2-Pyridinecarboxylic acid, 4-amino-3,5-dichloro-6-(2-furanylmethyl)- (9CI)  
 (CA INDEX NAME)



RN 496852-30-3 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-(2-furanylmethyl)- (9CI)  
(CA INDEX NAME)REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:391671 CAPLUS

DOCUMENT NUMBER: 136:385944

TITLE: Preparation of arylmethylsulfonylalkylcarbamates as  
agrochemical fungicides.INVENTOR(S): Ricks, Michael John; Klittich, Carla Jean Rasmussen;  
Cetusic, Jeannie Rachel Phillips; Iamauti, Marilene  
Tenguan; Morrison, Irene Mae; Sullenberger, Michael  
Thomas; **Lo, William Chi-leung; Buysse,**  
**Ann Marie;** Rieder, Brent Rieder; Mathieson, John  
Todd; Olson, Monica Britt

PATENT ASSIGNEE(S): Dow Agrosciences LLC, USA

SOURCE: PCT Int. Appl., 41 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002040431	A2	20020523	WO 2001-US44032	20011116
WO 2002040431	A3	20020801		
WO 2002040431	B1	20030320		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CO, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,  
HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU,  
LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SE,  
SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA,  
ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,  
CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,  
BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2428733	AA	20020523	CA 2001-2428733	20011116
AU 2002028640	A5	20020527	AU 2002-28640	20011116
EP 1341534	A2	20030910	EP 2001-989756	20011116
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001015452	A	20031223	BR 2001-15452	20011116
JP 2004513930	T2	20040513	JP 2002-542761	20011116
ZA 2003003819	A	20040517	ZA 2003-3819	20011116
NZ 525744	A	20041029	NZ 2001-525744	20011116
US 2004030189	A1	20040212	US 2003-415722	20030609
US 6815556	B2	20041109		

PRIORITY APPLN. INFO.:

US 2000-249653P	P	20001117
WO 2001-US44032	W	20011116

OTHER SOURCE(S): MARPAT 136:385944

AB ZNR5CHR4CR2R3SO2CHR1A [R1 = F, Cl, Br, CN, alkyl, alkenyl, alkynyl, haloalkyl, alkoxyalkyl, cycloalkyl, cycloalkenyl, CH2COR5, CH2CN; R2, R3 = H, Me, F, Cl; R4 = (substituted) alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl, aryl, heteroaryl; R5 = H, OR7, alkyl; R6 = H, alkyl, alkenyl, alkynyl, alkoxy, haloalkyl, (substituted) aryl, heteroaryl, OR7, N(R7)2, SR7; R7 = H, alkyl, alkenyl, alkynyl, haloalkyl, (substituted) aryl, heteroaryl; A = (substituted) aryl, heteroaryl; Z = COR6, C(S)R6, P(O)(R6)2, P(S)(R6)2; n = 0-2], were prepared. Thus, 4-chlorobenzylthiol was stirred with NaH in THF/DMF; (S)-isopropoxycarbonylvalinol tosylate was added followed by stirring for 3 h to give the sulfide, which in THF at -78° was treated with BuLi and di-tert-Bu dicarbonate followed by warming to room temperature and stirring for 4 h to give the N-protected sulfide. This in CH2Cl2 was treated with N-chlorosuccinimide under ice cooling followed by stirring for 4 h while warming to room temperature; MCPBA was added followed by 2 h stirring and workup to give a residue. This was treated with CF3CO2H in CH2Cl2 to give iso-Pr 1-[[[chloro(4-chlorophenyl)methyl]sulfonyl]methyl]-2-methylpropyl carbamate. The latter at 100 ppm gave 90-100% control of *Phytophthora infestans* on tomatoes.

L24 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:526059 CAPLUS

DOCUMENT NUMBER: 135:107254

TITLE: Preparation of 4-aminopicolinates as herbicides

INVENTOR(S): **Fields, Stephen Craig; Alexander, Anita Lenora; Balko, Terry William; Bjelk, Leslie Anne; Buysse, Ann Marie; Keese, Renee Joan; Krumel, Karl Leopold; Lo, William Chi-Leung; Lowe, Christian Thomas; Richburg, John Sanders; Ruiz, James Melvin**

PATENT ASSIGNEE(S): Dow Agrosiences LLC, USA

SOURCE: PCT Int. Appl., 86 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

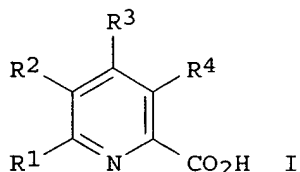
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001051468	A1	20010719	WO 2001-US1177	20010112
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE,				

SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW,  
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
 DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,  
 BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 CA 2396874 AA 20010719 CA 2001-2396874 20010112  
 US 6297197 B2 20011002 US 2001-760111 20010112  
 US 2001047099 A1 20011129  
 BR 2001007649 A 20021008 BR 2001-7649 20010112  
 EP 1246802 A1 20021009 EP 2001-942359 20010112  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
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 AU 760286 B2 20030508 AU 2001-29453 20010112  
 JP 2003519685 T2 20030624 JP 2001-551850 20010112  
 NZ 520244 A 20030725 NZ 2001-520244 20010112  
 RU 2220959 C1 20040110 RU 2002-121652 20010112  
 EP 1498413 A1 20050119 EP 2004-18297 20010112  
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 IE, FI, CY, TR  
 ZA 2002005557 A 20030711 ZA 2002-5557 20020711  
 NO 2002003370 A 20020819 NO 2002-3370 20020712  
 PRIORITY APPLN. INFO.: US 2000-176720P P 20000114  
 EP 2001-942359 A3 20010112  
 WO 2001-US1177 W 20010112  
 OTHER SOURCE(S): MARPAT 135:107254  
 GI

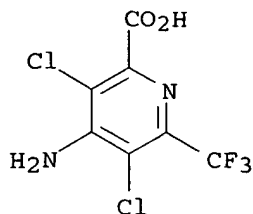


AB Title compds. [I; R1 = halo, alkoxy, aryloxy, CF<sub>3</sub>, etc.; R2 = H, halo, alkoxy, aryloxy, NO<sub>2</sub>, etc.; R3 = NO<sub>2</sub>, N<sub>3</sub>, (un)substituted amino, -N:CH<sub>2</sub>, -NHN:CH<sub>2</sub>; R4 = halo, alkoxy, alkylthio, aryloxy, NO<sub>2</sub>] were prepared. Thus, Me 6-bromo-3-chloropyridine-2-carboxylate was nitrated and the reduced product saponified to give I (R1 = Br, R2 = H, R3 = NH<sub>2</sub>, R4 = Cl). Data for biol. activity of I were given.

IT 350602-28-7P  
 RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of 4-aminopicolinates as herbicides)

RN 350602-28-7 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3,5-dichloro-6-(trifluoromethyl)- (9CI)  
 (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:282127 CAPLUS

DOCUMENT NUMBER: 133:54818

TITLE: Ribofuranosyl Triazolone: A Natural Product Herbicide with Activity on Adenylosuccinate Synthetase Following Phosphorylation

AUTHOR(S): Schmitzer, Paul R.; Graupner, Paul R.; Chapin, Eleanor L.; Fields, Steven C.; Gilbert, Jeff R.; Gray, Jim A.; Peacock, Cathy L.; Gerwick, B. Clifford

CORPORATE SOURCE: Dow AgroSciences, Indianapolis, IN, 46268, USA  
SOURCE: Journal of Natural Products (2000), 63(6), 777-781  
CODEN: JNPRDF; ISSN: 0163-3864

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB 2,4-Dihydro-4-( $\beta$ -D-ribofuranosyl)-1,2,4(3H)-triazol-3-one (I) was identified as the principal phytotoxic component of a fermentation broth derived

from an Actinomadura. I was also synthesized. Metabolite reversal studies suggested the target site was adenylosuccinate synthetase, which was confirmed by direct measurement of the activity of the 5'-phosphorylated derivative on the isolated enzyme.

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:569993 CAPLUS

DOCUMENT NUMBER: 131:351478

TITLE: Total synthesis of (+)-8'-trifluoromethyl abscisic acid

AUTHOR(S): Balko, Terry W.; Fields, Stephen C.; Webster, Jeffery D.

CORPORATE SOURCE: Discovery Research, Dow AgroSciences, Indianapolis, IN, 46268-1054, USA

SOURCE: Tetrahedron Letters (1999), 40(35), 6347-6351  
CODEN: TELEAY; ISSN: 0040-4039

PUBLISHER: Elsevier Science Ltd.

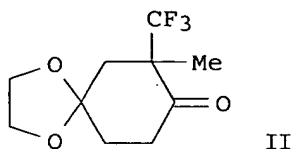
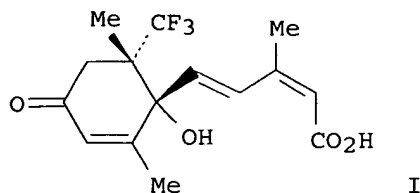
DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 131:351478

GI



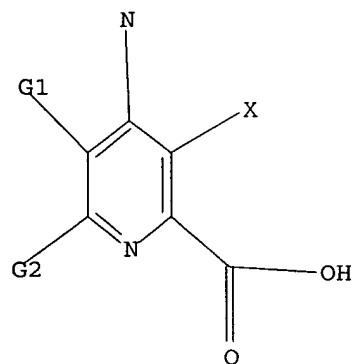
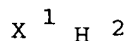


AB While 8'-trifluoromethylabscisic acid (I) was known to be one of the most active and stable analogs tested in assays for ABA-like activity, a thorough evaluation of its biol. properties was limited by compound availability. The current synthesis, which includes the preparation of a previously unknown key intermediate 2-methyl-2-trifluoromethyl-1,4-cyclohexanedione-mono ethylene ketal (II), has been accomplished in 14 steps and 3% yield. The key fluorinated ketal intermediate II was prepared in six steps and 20% yield.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d que l34

L28 STR



Ak<sup>3</sup>

Ak—O<sup>4</sup>

G1 [@1], [@2]

G2 [@3], [@4]

Structure attributes must be viewed using STN Express query preparation.

L32 16 SEA FILE=REGISTRY SSS FUL L28

L34 7 SEA FILE=CAPLUS ABB=ON PLU=ON L32

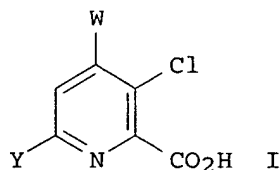
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L34 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:122777 CAPLUS  
 DOCUMENT NUMBER: 142:192757  
 TITLE: Preparation of 6-(1,1-difluoroalkyl)-4-aminopicolinate derivative herbicides  
 INVENTOR(S): Balko, Terry William; Fields, Stephen Craig; Irvine, Nicholas Martin; Lowe, Christian Thomas; Schmitzer, Paul Richard  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 10 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

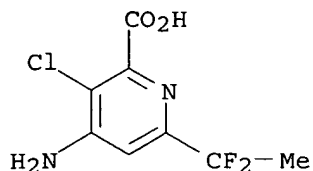
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005032651	A1	20050210	US 2004-911683	20040804
AU 2004265309	A1	20050224	AU 2004-265309	20040804
CA 2532100	AA	20050224	CA 2004-2532100	20040804
WO 2005016887	A1	20050224	WO 2004-US25116	20040804
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1651607	A1	20060503	EP 2004-780023	20040804
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
PRIORITY APPLN. INFO.:			US 2003-493555P	P 20030804
			WO 2004-US25116	W 20040804

OTHER SOURCE(S): CASREACT 142:192757; MARPAT 142:192757  
 GI



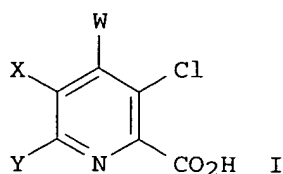
AB 6-(1,1-Difluoroalkyl)-4-aminopicolinate derivs. I (Y = 1,1-difluoroalkyl; W = NO<sub>2</sub>, N<sub>3</sub>, N:CR<sub>1</sub>R<sub>2</sub> or NHN:CR<sub>3</sub>R<sub>4</sub>; R<sub>1</sub>, R<sub>2</sub> = H, alkyl, alkenyl, alkynyl, aryl, heteroaryl, alkoxy, amino, acyl, etc.; R<sub>3</sub>, R<sub>4</sub> = H, alkyl, alkenyl, alkynyl, aryl or heteroaryl; :CR<sub>3</sub>R<sub>4</sub> = 5- or 6-membered saturated ring) are prepared as broad-spectrum herbicides.  
 IT 837367-59-6P  
 RL: AGR (Agricultural use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation as herbicide)

RN 837367-59-6 CAPLUS  
 CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-(1,1-difluoroethyl)- (9CI)  
 (CA INDEX NAME)

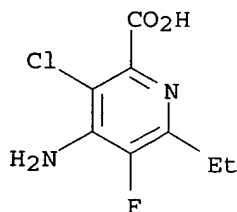


L34 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 2004:825101 CAPLUS  
 DOCUMENT NUMBER: 141:308993  
 TITLE: 6-Alkyl or alkenyl-4-aminopicolinates and their use as herbicides  
 INVENTOR(S): Balko, Terry William; Buysse, Ann Marie; Fields, Stephen Craig; Irvine, Nicholas Martin; Lo, William Chi-Leung; Lowe, Christian Thomas; Richburg, John Sanders; Schmitzer, Paul Richard  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 12 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

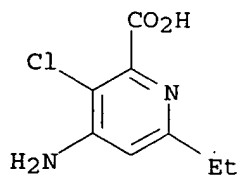
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US 2004198608	A1	20041007	US 2004-816611	20040402
AU 2004228666	A1	20041021	AU 2004-228666	20040402
CA 2517486	AA	20041021	CA 2004-2517486	20040402
WO 2004089906	A2	20041021	WO 2004-US10358	20040402
WO 2004089906	A3	20041202		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1608624	A2	20051228	EP 2004-749733	20040402
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
BR 2004008935	A	20060404	BR 2004-8935	20040402
CN 1764646	A	20060426	CN 2004-80007800	20040402
NO 2005004378	A	20051018	NO 2005-4378	20050921
PRIORITY APPLN. INFO.:			US 2003-459892P	P 20030402
			WO 2004-US10358	A 20040402
OTHER SOURCE(S):		MARPAT 141:308993		
GI				



- AB 4-Aminopicolinates with alkyl or alkenyl substituents in the 6-position (I, wherein X = H, F; Y = C1-4 alkyl, C1-4-alkoxy- or thioalkoxy-substituted alkyl, or C2-3 alkenyl; and W represents NO<sub>2</sub>, N<sub>3</sub>, NR<sub>1</sub>R<sub>2</sub>, etc.; R<sub>1</sub> and R<sub>2</sub> independently = H, C1-6 alkyl, etc.) and their amine and acid derivs. are potent herbicides demonstrating a broad spectrum of weed control. Thus, Me 4-amino-3-chloro-6-ethylpyridine-2-carboxylate (II) at 250 ppm controlled cocklebur (*Xanthium strumarium*), lamb's-quarters (*Chenopodium album*), and pigweed (*Amaranthus retroflexus*) by 95, 100, and 98%, resp. (postemergent control), with no injury to corn (*Zea mays*). Preemergent control of lamb's-quarters by II at 280 ppm was 98%.
- IT 767334-35-0 767334-36-1 767334-37-2  
767334-38-3 767334-39-4 767334-40-7  
767334-41-8  
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)  
(as herbicide with broad spectrum of weed control)
- RN 767334-35-0 CAPLUS
- CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-ethyl-5-fluoro- (9CI). (CA INDEX NAME)

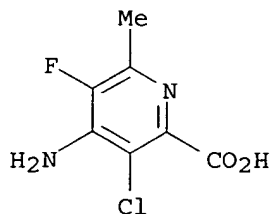


- RN 767334-36-1 CAPLUS
- CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-ethyl- (9CI) (CA INDEX NAME)



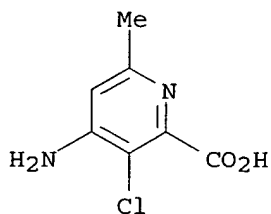
- RN 767334-37-2 CAPLUS
- CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-5-fluoro-6-methyl- (9CI) (CA INDEX NAME)

INDEX NAME)



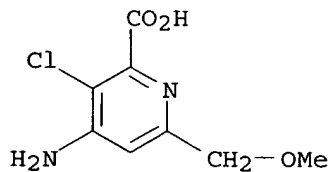
RN 767334-38-3 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-methyl- (9CI) (CA INDEX NAME)



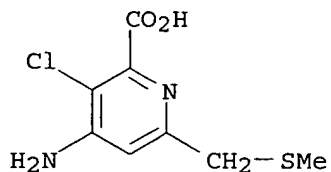
RN 767334-39-4 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-(methoxymethyl)- (9CI) (CA INDEX NAME)



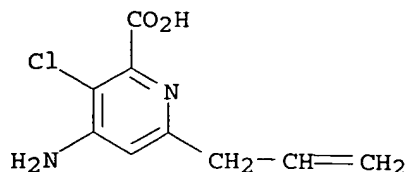
RN 767334-40-7 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-[(methylthio)methyl]- (9CI) (CA INDEX NAME)



RN 767334-41-8 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-(2-propenyl)- (9CI) (CA INDEX NAME)



L34 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:117817 CAPLUS

DOCUMENT NUMBER: 138:153444

TITLE: Preparation of 6-aryl-4-aminopicolinic acids as herbicides with excellent crop selectivity

INVENTOR(S): Balko, Terry William; Buysse, Ann Marie; Epp, Jeffrey Brian; Fields, Stephen Craig; Lowe, Christian Thomas; Keese, Renee Joan; Richburg, John Sanders, III; Ruiz, James Melvin; Weimer, Monte Ray; Green, Renard Antonio; Gast, Roger Eugene; Bryan, Kristy; Irvine, Nicholas Martin; Lo, William Chi-Leung; Brewster, William Kirkland; Webster, Jeffrey Dale

PATENT ASSIGNEE(S): Dow AgroSciences, LLC, USA

SOURCE: PCT Int. Appl., 84 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

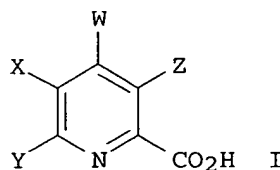
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

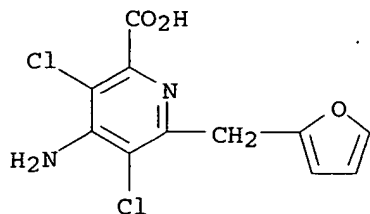
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003011853	A1	20030213	WO 2002-US24120	20020730
WO 2003011853	C1	20040715		
-W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2453623	AA	20030213	CA 2002-2453623	20020730
US 2003114311	A1	20030619	US 2002-209448	20020730
US 6784137	B2	20040831		
EP 1414814	A1	20040506	EP 2002-756794	20020730
EP 1414814	B1	20050202		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
BR 2002011532	A	20040914	BR 2002-11532	20020730
CN 1551876	A	20041201	CN 2002-814816	20020730
JP 2005505523	T2	20050224	JP 2003-517045	20020730
PRIORITY APPLN. INFO.:			US 2001-308617P	P 20010730
			WO 2002-US24120	W 20020730

OTHER SOURCE(S): MARPAT 138:153444

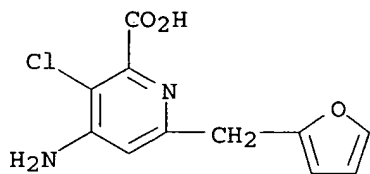
GI



- AB 6-Aryl-4-aminopicolinic acids (shown as I; variables defined below; e.g. 4-amino-3-chloro-6-(4-methylphenyl)pyridine-2-carboxylic acid) and agriculturally acceptable derivs. of the carboxylic acid group are potent herbicides demonstrating a broad spectrum of weed control. Twelve herbicidal compns. are tabulated. Although the methods of preparation are not claimed, 47 example preps. are included and >200 specific I are mentioned along with phys. and/or herbicidal properties. Post-emergent herbicidal activities are included for some I against cocklebur (*Xanthium strumarium*), lambsquarter (*Chenopodium album*), barnyard grass (*Echinochloa crus-galli*) and yellow nutsedge (*Cyperus esculentus*); selectivity to wheat and corn is also shown. Pre-emergent herbicidal activities are included for some I against lambsquarter (*Chenopodium album*), pigweed (redroot) (*Amaranthus retroflexus*), crabgrass (large) (*Digitaria sanguinalis*), and giant foxtail (*Setaria faberii*). For I: X = H, halogen, C1-C6 alkyl, C1-C6 alkoxy, C1-C6 alkylthio, aryloxy, nitro, C1-C6 haloalkyl, C1-C6 haloalkoxy, thiocyanate, or cyano; Y = aryl, Ph, indanyl or naphthyl or heteroaryl (5- or 6-membered heteroarom. rings containing  $\geq 1$  heteroatoms which may be fused to other aromatic systems; aryl or heteroaryl group being unsubstituted or substituted with  $\geq 1$  substituents = halogen, hydroxy, nitro, cyano, aryloxy, formyl, C1-C6 alkyl, C2-C6 alkenyl, C2-C6 alkynyl, C1-C6 alkoxy, halogenated C1-C6 alkyl, halogenated C1-C6 alkoxy, C1-C6 acyl, C1-C6 alkylthio, C1-C6 alkylsulfinyl, C1-C6 alkylsulfonyl, aryl, C1-C6 OC(O)alkyl, C1-C6 NHC(O)alkyl, C(O)OH, C1-C6 C(O)Oalkyl, C(O)NH<sub>2</sub>, C1-C6 C(O)NHalkyl, C1-C6 C(O)N(alkyl)<sub>2</sub>, -OCH<sub>2</sub>CH<sub>2</sub>-, -OCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>-, -OCH<sub>2</sub>O- or -OCH<sub>2</sub>CH<sub>2</sub>O-). Z = halogen, C1-C6 alkyl, C1-C6 alkoxy, C1-C6 alkylthio, aryloxy, nitro, C1-C6 haloalkyl, C1-C6 haloalkoxy, thiocyanate, or cyano; and W = -NO<sub>2</sub>, -N<sub>3</sub>, -NR<sub>1</sub>R<sub>2</sub>, -N:CR<sub>3</sub>R<sub>4</sub> or -NHN:CR<sub>3</sub>R<sub>4</sub> (R<sub>1</sub> and R<sub>2</sub> = H, C1-C6 alkyl, C3-C6 alkenyl, C3-C6 alkynyl, aryl, heteroaryl, hydroxy, C1-C6 alkoxy, amino, C1-C6 acyl, C1-C6 carboalkoxy, C1-C6 alkylcarbonyl, C1-C6 alkylsulfonyl, C1-C6 trialkylsilyl or C1-C6 dialkyl phosphonyl or R<sub>1</sub> and R<sub>2</sub> taken together with N = 5- or 6-membered (un)saturated ring which may contain addnl. O, S or N heteroatoms; and R<sub>3</sub> and R<sub>4</sub> = H, C1-C6 alkyl, C3-C6 alkenyl, C3-C6 alkynyl, aryl or heteroaryl or R<sub>3</sub> and R<sub>4</sub> taken together with :C = a 5- or 6-membered saturated ring).
- IT 496852-28-9P, 4-Amino-3,5-dichloro-6-(2-furfuryl)pyridine-2-carboxylic acid 496852-30-3P, 4-Amino-3-chloro-6-(2-furfuryl)pyridine-2-carboxylic acid  
 RL: AGR (Agricultural use); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (preparation of 6-aryl-4-aminopicolinic acids as herbicides with excellent crop selectivity)
- RN 496852-28-9 CAPLUS
- CN 2-Pyridinecarboxylic acid, 4-amino-3,5-dichloro-6-(2-furanylmethyl)- (9CI)  
 (CA INDEX NAME)



RN 496852-30-3 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3-chloro-6-(2-furanylmethyl)- (9CI)  
(CA INDEX NAME)REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:526059 CAPLUS

DOCUMENT NUMBER: 135:107254

TITLE: Preparation of 4-aminopicolinates as herbicides

INVENTOR(S): Fields, Stephen Craig; Alexander, Anita Lenora; Balko,  
Terry William; Bjelk, Leslie Anne; Buysse, Ann Marie;  
Keese, Renee Joan; Krumel, Karl Leopold; Lo, William  
Chi-Leung; Lowe, Christian Thomas; Richburg, John  
Sanders; Ruiz, James Melvin

PATENT ASSIGNEE(S): Dow Agrosiences LLC, USA

SOURCE: PCT Int. Appl., 86 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

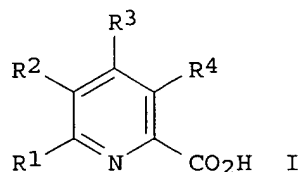
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001051468	A1	20010719	WO 2001-US1177	20010112
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2396874	AA	20010719	CA 2001-2396874	20010112
US 6297197	B2	20011002	US 2001-760111	20010112
US 2001047099	A1	20011129		
BR 2001007649	A	20021008	BR 2001-7649	20010112



EP 1246802 A1 20021009 EP 2001-942359 20010112  
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 IE, SI, LT, LV, FI, RO, MK, CY, AL, TR  
 AU 760286 B2 20030508 AU 2001-29453 20010112  
 JP 2003519685 T2 20030624 JP 2001-551850 20010112  
 NZ 520244 A 20030725 NZ 2001-520244 20010112  
 RU 2220959 C1 20040110 RU 2002-121652 20010112  
 EP 1498413 A1 20050119 EP 2004-18297 20010112  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, FI, CY, TR  
 ZA 2002005557 A 20030711 ZA 2002-5557 20020711  
 NO 2002003370 A 20020819 NO 2002-3370 20020712  
 PRIORITY APPLN. INFO.: US 2000-176720P P 20000114  
 EP 2001-942359 A3 20010112  
 WO 2001-US1177 W 20010112  
 OTHER SOURCE(S): MARPAT 135:107254  
 GI

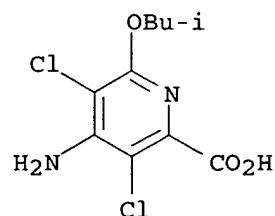


AB Title compds. [I; R1 = halo, alkoxy, aryloxy, CF3, etc.; R2 = H, halo, alkoxy, aryloxy, NO2, etc.; R3 = NO2, N3, (un)substituted amino, -N:CH2, -NHN:CH2; R4 = halo, alkoxy, alkylthio, aryloxy, NO2] were prepared. Thus, Me 6-bromo-3-chloropyridine-2-carboxylate was nitrated and the reduced product saponified to give I (R1 = Br, R2 = H, R3 = NH2, R4 = Cl). Data for biol. activity of I were given.

IT 350601-91-1P 350602-28-7P  
 RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of 4-aminopicolinates as herbicides)

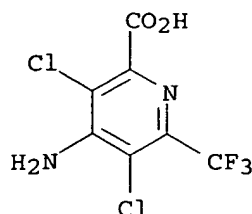
RN 350601-91-1 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3,5-dichloro-6-(2-methylpropoxy) - (9CI)  
 (CA INDEX NAME)



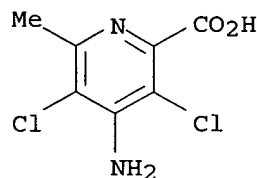
RN 350602-28-7 CAPLUS

CN 2-Pyridinecarboxylic acid, 4-amino-3,5-dichloro-6-(trifluoromethyl) - (9CI)  
 (CA INDEX NAME)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L34 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1974:56246 CAPLUS  
 DOCUMENT NUMBER: 80:56246  
 TITLE: Poultry manure phytotoxicity  
 AUTHOR(S): Minchinton, I. R.; Jones, D. L.; Sang, J. P. L.  
 CORPORATE SOURCE: Div. Agric. Chem., Melbourne, Australia  
 SOURCE: Journal of the Science of Food and Agriculture (1973), 24(11), 1437-48  
 CODEN: JSFAAE; ISSN: 0022-5142  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Phytotoxicity of poultry deep litter manure was due to 4-amino-3,5-dichloro-6-methylpicolinic acid (I) [50978-41-1]. I is probably a metabolite of 4-amino-3,5-dichloro-2,6-lutidine (II) [50978-40-0], an impurity in the clopidol [2971-90-6] used in feeds to control coccidiosis.  
 IT 50978-41-1  
 RL: BIOL (Biological study)  
 (of poultry manure, phytotoxicity in relation to)  
 RN 50978-41-1 CAPLUS  
 CN 2-Pyridinecarboxylic acid, 4-amino-3,5-dichloro-6-methyl- (9CI) (CA INDEX NAME)



L34 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1974:14855 CAPLUS  
 DOCUMENT NUMBER: 80:14855  
 TITLE: Polychloro derivatives of dicarboxy pyridines  
 INVENTOR(S): Bimber, Russel M.; Schuldt, Paul H.  
 PATENT ASSIGNEE(S): Diamond Shamrock Corp.  
 SOURCE: U.S., 8 pp. Division of U.S. 3,637,716 (CA 76;126800y).  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3766195	A	19731016	US 1971-170282	19710809
US 3637716	A	19720125	US 1969-840484	19690709

PRIORITY APPLN. INFO.:  
 US 1969-840484 A3 19690709

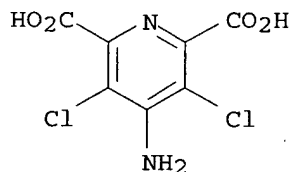
GI For diagram(s), see printed CA Issue.

AB Pesticidal chloropyridinecarboxylic acids [I, Rn = 2-, 3-, 4-CO<sub>2</sub>H, 2,4-, 2,6-, 3,5-(CO<sub>2</sub>H)<sub>2</sub>, R1 = Cl], their NH<sub>4</sub><sup>+</sup> and K salts and some 2- and 4-NH<sub>2</sub> derivs. were prepared The acids were prepared by oxidation of the corresponding chlorocyanopyridines with 80% H<sub>2</sub>SO<sub>4</sub>, which in turn were treated with suitable reagents to give the other derivs.

IT 35592-27-9P 35592-35-9P 35592-37-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

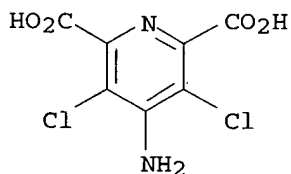
RN 35592-27-9 CAPLUS

CN 2,6-Pyridinedicarboxylic acid, 4-amino-3,5-dichloro- (9CI) (CA INDEX NAME)



RN 35592-35-9 CAPLUS

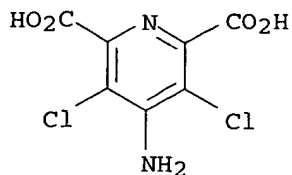
CN 2,6-Pyridinedicarboxylic acid, 4-amino-3,5-dichloro-, monopotassium salt (9CI) (CA INDEX NAME)



● K

RN 35592-37-1 CAPLUS

CN 2,6-Pyridinedicarboxylic acid, 4-amino-3,5-dichloro-, dipotassium salt (9CI) (CA INDEX NAME)



● 2 K

L34 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1972:126800 CAPLUS

DOCUMENT NUMBER: 76:126800

TITLE: Polychloro derivatives of mono- and dicarboxypyridines as pesticides and as chemical intermediates

INVENTOR(S): Bimber, Russell M.; Schuldt, Paul H.

SOURCE: U.S., 8 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3637716	A	19720125	US 1969-840484	19690709
US 3766195	A	19731016	US 1971-170282	19710809
			US 1969-840484	A3 19690709

PRIORITY APPLN. INFO.:

GI For diagram(s), see printed CA Issue.

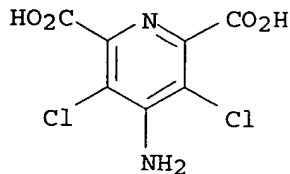
AB Pesticides (I, R1 = Cl, CO2H, R2 = Cl, NH2; II, R1 = Cl, CO2H, NH2, R2 = Cl, CO2H; III) were prepared by hydrolysis of nitriles with H2SO4. Thus, tetrachloro-2-cyanopyridine treated with H2SO4 gave tetrachloropicolinic acid (II, R1 = R2 = Cl). Similarly prepared were 24 addnl. I, II, and III, including some of their acid chlorides, Me esters, and K and NH4+ salts. Trichloro-dinicotinoyl dichloride (I (R1 = CO2H, R2 = Cl) diacid chloride) at 500 ppm killed 75% Tetranychus species and 40% Musca domestica (housefly). Pesticidal and herbicidal tests for other I, II, III, etc. are given.

IT 35592-27-9P 35592-35-9P 35592-37-1P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

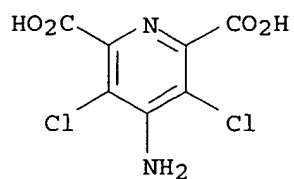
RN 35592-27-9 CAPLUS

CN 2,6-Pyridinedicarboxylic acid, 4-amino-3,5-dichloro- (9CI) (CA INDEX NAME)



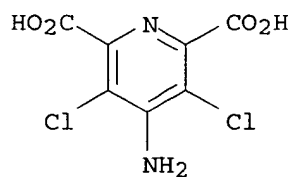
RN 35592-35-9 CAPLUS

CN 2,6-Pyridinedicarboxylic acid, 4-amino-3,5-dichloro-, monopotassium salt  
(9CI) (CA INDEX NAME)



● K

RN 35592-37-1 CAPLUS  
CN 2,6-Pyridinedicarboxylic acid, 4-amino-3,5-dichloro-, dipotassium salt  
(9CI) (CA INDEX NAME)



● 2 K